

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000716**Date Inspected:** 28-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Sha Zhi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock-up 77 and 89**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to observe the Welding operations of the Caltrans Mock-up # 89.00 and # 77.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector observed ZPMC shop personnel performing Flux Core Arc Welding (FCAW) at Mock-up # 89.00 Skin Plate C sub assembly MA23 longitudinal plate Complete Penetration Joint (CJP) weld # 8. ZPMC certified welder Mr. Li Zhaoqin performed the above mentioned welding. ZPMC QA Inspector Mr. Shen Xue Jun stated that the welding procedure for the above mentioned weld joints was WPS-B-T-2231-B-U3-F.

Caltrans QA monitored Submerged Arc Welding of Mock-up # 89.00 sub assembly MA23 weld # 25 filler passes. Welding was performed by ZPMC welder Ms. Gu Cai Hong. The following parameters were recorded by QA Inspector Viars, amperage 652, voltage 34.6 with a travel speed of 651 mm/min. The following parameters are within the tolerances of the designated welding procedure specification, WPS-B-T-2231-B-U3C.

Caltrans QA performed random fit-up measurements of Mock-up # 77.00 flange to bottom diaphragm measurements (prior to welding flange sections together). A gap of 5.5 mm was noted on sub assembly SA274 prior to welding. This area was shown to ZPMC QA Lei Tao. Mr. Tao stated that the gap dimensions would be checked again prior to attaching the flange to the diaphragm welding. The following picture of the taper gauge shows the above mentioned gap.

The Caltrans QA Inspector monitored welding operations of Mock-up # 89.00 and performed random dimensional

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verifications of Mock-up # 77.00 diaphragm flange preliminary fit-up. Welding operations appear to be conformance with AWS D1.5 requirements.



Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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| Inspected By: | Viars,Larry | Quality Assurance Inspector |
| Reviewed By: | Cuellar,Robert | QA Reviewer |
